

CLAIMS

1. A breathing assistance device for a patient, comprising:

- A source of respiratory pressurised gas,
- A breathing connection for allowing the patient to receive said gas,
- At least one sensor for acquiring a parameter representative of the operation of the device,

characterised in that said gas source is a ventilator, and said ventilator is integrated into a removable module which also comprises at least one sensor for acquiring a parameter representative of the operation of the device.

2. The device as claimed in the preceding claim, characterised in that said module comprises pressure sensor of respiratory gas and a flow sensor.

3. The device as claimed in any one of the preceding claims, characterised in that the module is fixed on the device by a removable connection, such that disassembly of the module is easy.

4. The device as claimed in the preceding claim, characterised in that said removable connection comprises a thread pitch.

5. The device as claimed in Claim 3, characterised in that said removable connection comprises means for clipping the module.

6. The device as claimed in any one of the preceding claims, characterised in that said breathing connection is in the form of a mask.

7. The device as claimed in the preceding claim, characterised in that said mask is a mask not having means allowing leaks, such as vents.
- 5 8. The device as claimed in any one of the preceding claims, characterised in that the module is fixed directly on the breathing connection, such that the device does not comprise a conduit for conveying respiratory gas which would connect the breathing connection to a fixed offline console of the device.
- 10 9. The device as claimed in the preceding claim, characterised in that the ensemble formed by the breathing connection and the module is linked to a control console of the device.
- 15 10. The device as claimed in the preceding claim, characterised in that said link allows data to be transmitted between said ensemble and said console.
- 20 11. The device as claimed in the preceding claim, characterised in that said link is a wireless link.
- 25 12. The device as claimed in Claim 10, characterised in that said link helps to convey the energy required to operate the components of the module from said console to said ensemble.
- 30 13. The device as claimed in the preceding claim, characterised in that said link is a wire link.
14. The device as claimed in any one of the preceding claims, characterised in that the ventilator is an axial ventilator.

15. The device as claimed in the preceding claim, characterised in that the rotor of the ventilator axial comprises a single stage.

5 16. The device as claimed in any one of the two preceding claims, characterised in that in the ventilator the respective directions of the input and output of respiratory gas are substantially parallel.

17. The device as claimed in any one of the three preceding claims, characterised in that the ventilator comprises :

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- a central input substantially aligned with the axis of rotation of the rotor of the ventilator,
  - an outlet allowing the flux generated by said rotor to be collected according to an oblique direction relative to said axis of rotation, and
  - 15 • means for rectifying said flux generated and collected, so that this flux flows out of the ventilator in a general direction substantially parallel to said axis of rotation of the rotor of the ventilator.

20 18. The device as claimed in any one of the preceding claims, characterised in that the device is of type BPAP.

19. The device as claimed in any one of Claims 1 to 17, characterised in that the device is of type CPAP.